

REMARKS

Following entry of this Amendment, claims 1, 7, 8, 10 and 16-30 will remain pending. Claims 2-6 and 11-15 have been canceled without prejudice and new dependent claims 16-30 are introduced.

Reconsideration of the pending claims is respectfully requested in view of the foregoing Amendment which is at least supported at FIG. 3 and page 6, line 14 to page 7, line 4 of the application specification. No new matter is introduced.

Claims Rejections - 35 U.S.C. § 103(a)

Pending claims 1, 3, 5-8 and 10-14 stand rejected under 35 USC § 103(a) as being unpatentable over U.S. Pat. No. 5,119,801 to Eizenhoefer ("Eizenhoefer") in view of U.S. Pat. No. 5,869,189 to Hagood ("Hagood"). Claims 3, 5, 6 and 11-14 have been canceled without prejudice.

Prior art shock wave devices including traditional, singular piezoelectric elements such as Eizenhofer's apparatus do not provide predictable guidance for the claimed invention. Instead, applicant's invention overcomes the disadvantages of singular piezoelectric elements with new modules having a plurality of piezofibers in each module. Withdrawal of the pending rejection and allowance of amended independent claim 1 and dependent claims 7, 8, 10 and new dependent claims 16-30 is respectfully requested.

As set forth in Applicant's specification Background, prior art piezoelectric ceramic elements like Eizenhofer's elements (P) have radiating surface areas of from several square millimeters to several square centimeters that result in high strain and restrict the ability to reduce the size of piezoelectric shock wave generators. Such prior art therefore limits further shock wave applications for miniaturized generators. Hagood does not cure the deficiencies of Eizenhofer where Hagood does not relate to shock wave generating applications or provide guidance for any modular spatial units having a plurality of piezoelectric fibers in each module.

In this regard, Applicant respectfully notes that the suggestions at page 2 of the Final Office Action that Hagood is in the same field of endeavor and “Hagood (‘189) teaches a medical transducer wherein multiple piezoelectric fibers are integrated in a composite material (col. 2, lines 1-10)” is not factually correct. Hagood does not disclose any “medical ultrasonic transducer” or relate to shock wave generators for any use, instead describing sending and actuating structures such as “aircraft wings” (Hagood col. 1, line 62) (see also Applicant’s response dated January 30, 2009 at page 6).

Although Eizenhofer’s singular piezoelectric elements are referenced as “modules” at page 2 of the Final Office Action, the limitation of independent claim 1 has been amended to clarify that each module of a plurality of modules in Applicant’s claimed invention includes a plurality of piezoelectric fibers in a composite as a spatial unit. Applicant’s piezoelectric fibers’ modules are not singular piezoelectric elements like Eizenhofer’s structures and specifically avoid the aforementioned disadvantages of the prior art. Absent knowledge of Applicant’s invention, those of ordinary skill in the art are offered no predictable guidance from Hagood’s piezoelectric fibers for sensing and actuating structures (like airplane wings) as to how or why one would substitute or replace Eizenhofer’s singular piezoelectric elements with Hagood’s fibers. Where neither Eizenhofer nor Hagood even recognize a need to address the strain and size deficiencies of the structure of prior art singular piezoelectric elements, no predictable and enabling guidance is offered to arrive at the invention of independent claim 1, and the pending claims are submitted to be novel and non-obvious over the prior art.

Applicant also submits that the prior art offers no predictable guidance for the invention of the amended dependent claims. The references together provide no modules of piezoelectric fibers and Eizenhofer teaches “all” singular piezoelectric elements controlled together (Eizenhofer col. 3, line 45) without suggestion of a module group to be interconnected and controllable apart from one or more other module groups (claims 7, 26 and 28-30) or individually controllable modules (claims 8 and 23-25). None of these references suggest any of a plurality of modules with different sizes

from one another (claims 17-21, 23, 24, 28 and 29) or different forms of radiating surfaces (claims 18, 19, 21, 22, 24, 29 and 30). None of the references suggest separate modules of a plurality of piezoelectric fibers arranged on a carrier including a planar, spherical and/or cylindrical geometry (claims 10, 16-19 and 27) or a pipe-shaped cylindrical segment with the modules arranged providing a horizontal cylindrical focus line (claims 16-19 and 26). Accordingly, the dependent claims are also submitted as non-obvious and patentable over the prior art.

In view of the foregoing remarks, Applicant submits that the application is in condition for allowance. Favorable reconsideration of the application and allowance of the claims is respectfully requested. Applicant's Attorney cordially invites the Examiner to contact the undersigned at the telephone number provided below if such will advance the prosecution of the application.

Applicant has included a fee for the accompanying Request for Continued Examination under 37 C.F.R. §1.17(e). If any additional fees or extensions are due in connection with the filing of this Amendment or the accompanying papers, or otherwise in the course of prosecution of this application, the same are authorized, and please charge the fees to Hunton & Williams Deposit Account No. 50-0206, Order No. 69643.001500.

Respectfully submitted,



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